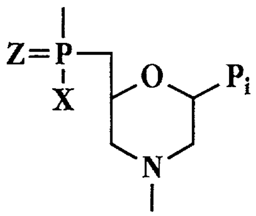


Fig. 1A

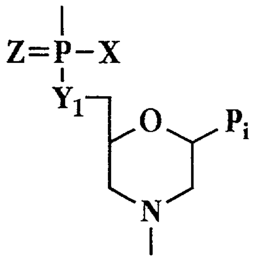


Fig. 1B

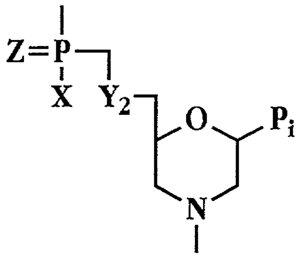


Fig. 1C

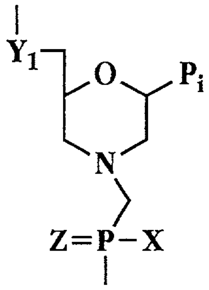


Fig. 1D

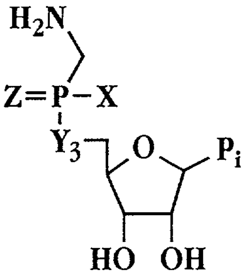


Fig. 1E

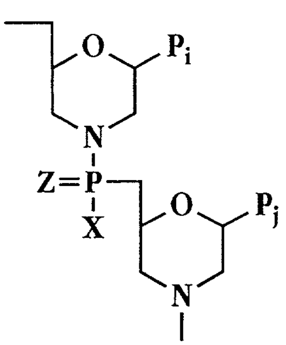


Fig. 2A-A

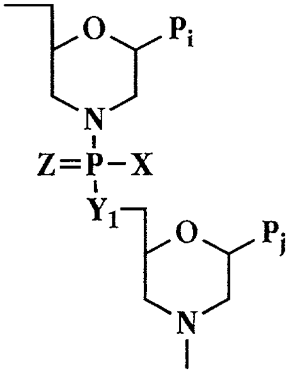


Fig. 2B-B

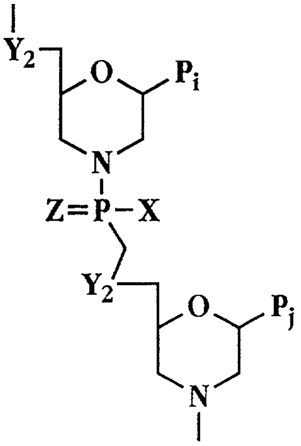


Fig. 2C-C

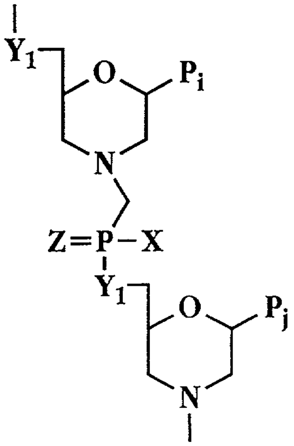


Fig. 2D-D/E-E

```
TGCAACTCCCCGTAGCAGCG     charged
--------------------
ACGTTGAGGGGCATCGTCGC     uncharged

TGCAACTCCCCGTAGCAGCG     charged
--------------------
ACGTTGAGGGGCATCGTC       uncharged

TGACAACTCCCCGTAGCAGCG    charged
--------------------
ACGTTGAGGGGCATCG         uncharged

TGCAACTCCCCGTAGCAGCG     charged
--------------------
ACGTTGAGGGGCAT           uncharged

TGCAACTCCCCGTAGCAGCG     charged
--------------------
 GTTGAGGGGCAT            uncharged

TGCAACTCCCCGTAGCAGCG     charged
--------------------
    TGAGGGGCATCGTCGC     uncharged
```

Fig. 3

```
        CCCGTAGCAGCGNNNNN   charged
        -----------------
ACGTTGAGGGGCATCGTCGC        uncharged

        CCCGTAGCAGCGNNNNN   charged
        -----------------
ACGTTGAGGGGCATCGTC          uncharged

        CCCGTAGCAGCGNNNNN   charged
        -----------------
ACGTTGAGGGGCATCG            uncharged

[NNNN is optional]
```

Fig. 4A

```
         CCGTAGCAGC         charged
         ----------
ACGTTGAGGGGCATCGTCGC        uncharged

               C-
              /\
         CCGTAGAGC          charged
         ---------
ACGTTGAGGGGCATCTCGC         uncharged
```

Fig. 4B

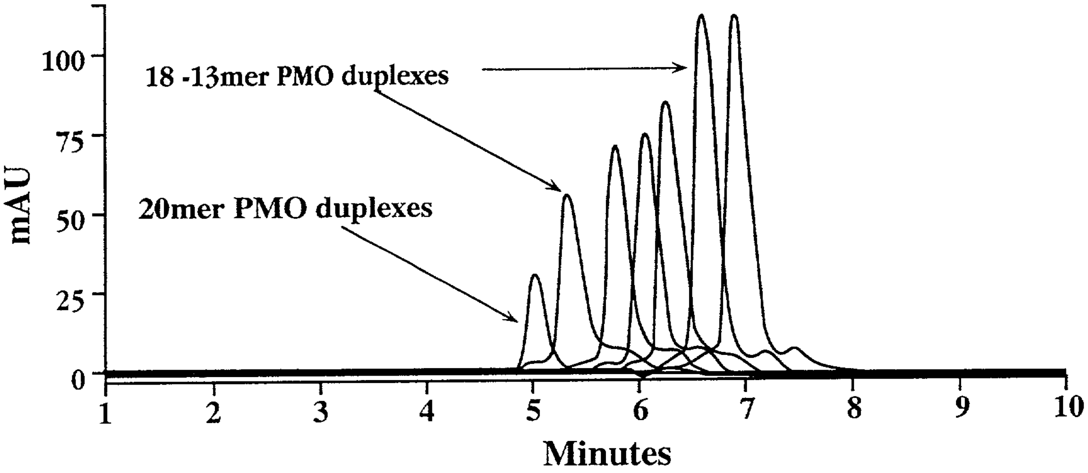

100
75
50
25
0
mAU
18 -13mer PMO duplexes
20mer PMO duplexes
1
2
3
4
5
6
7
8
9
10
Minutes

Fig. 5A

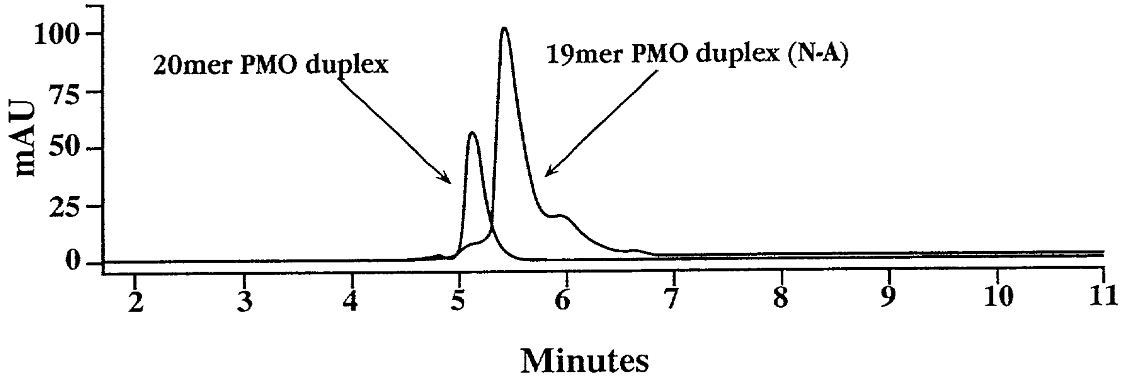
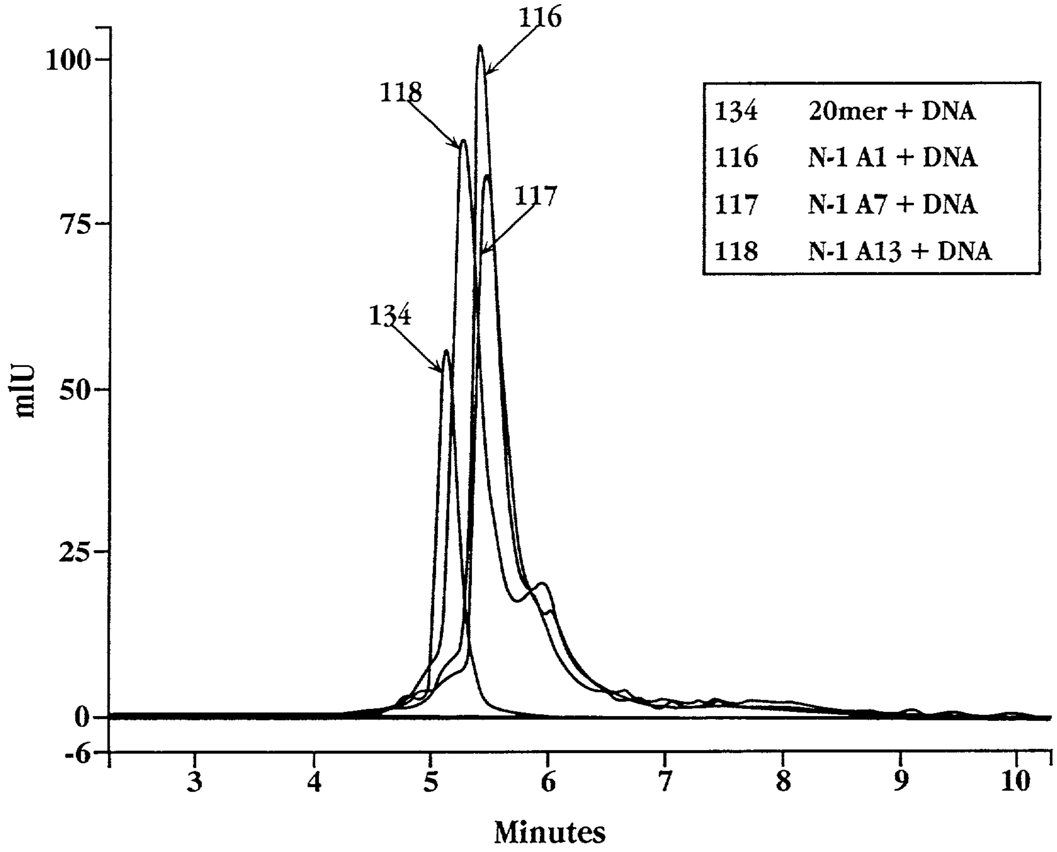

100
75
50
25
0
mAU
20mer PMO duplex
19mer PMO duplex (N-A)
2
3
4
5
6
7
8
9
10
11
Minutes

Fig. 5B



134	20mer + DNA
116	N-1 A1 + DNA
117	N-1 A7 + DNA
118	N-1 A13 + DNA

Fig. 6

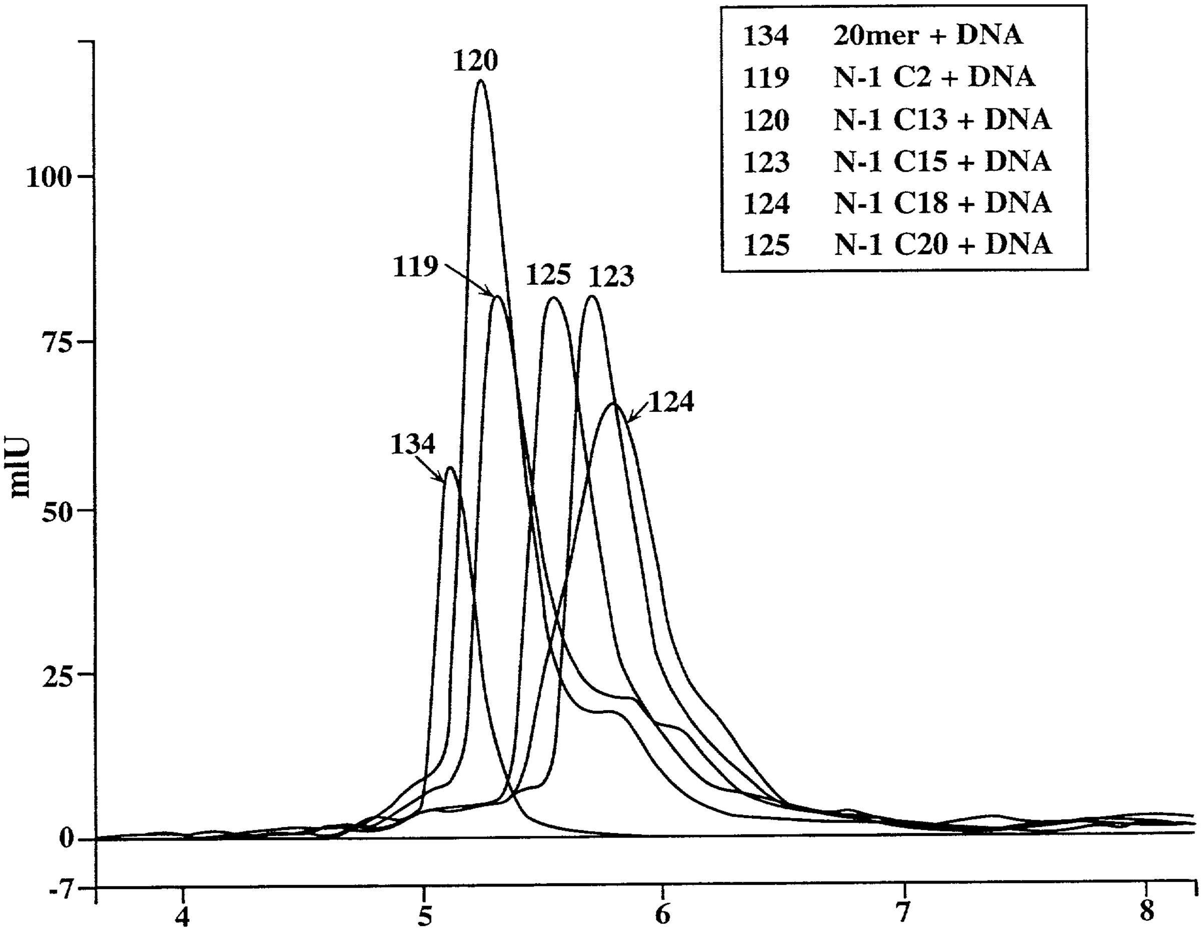
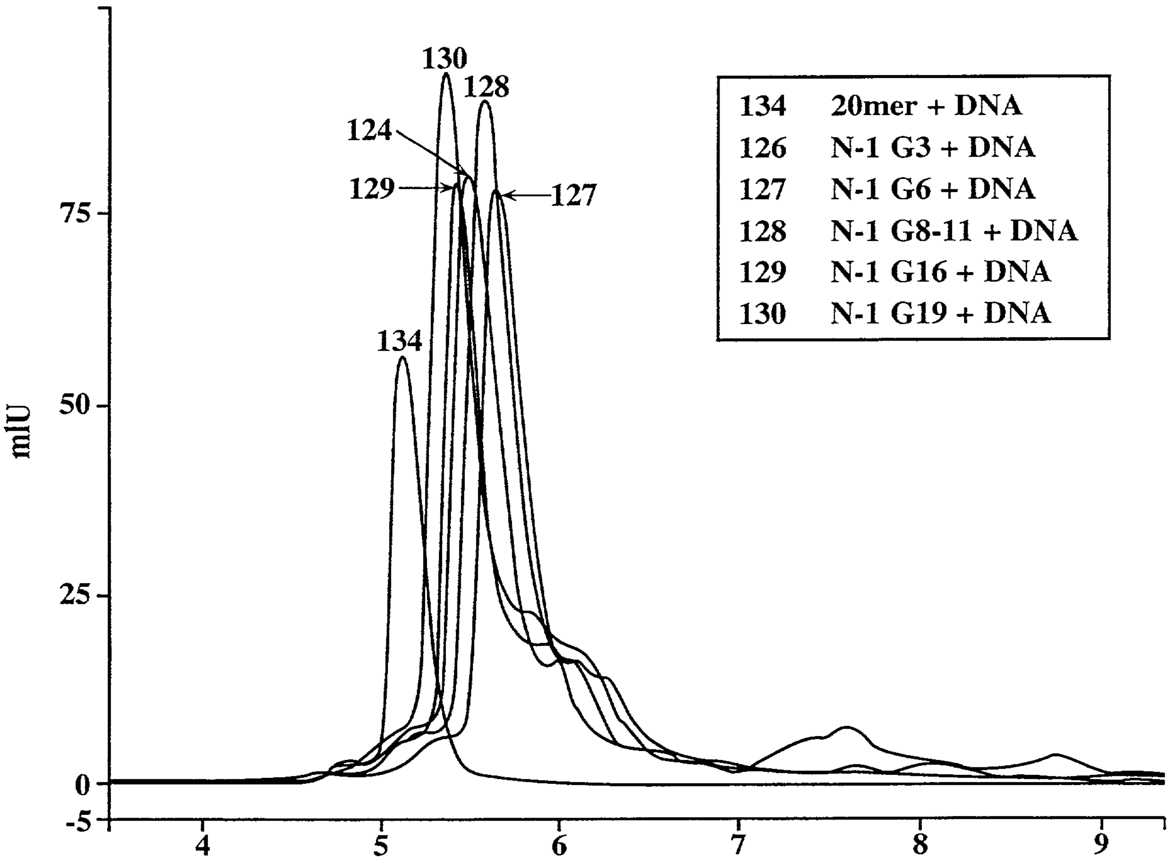

134 20mer + DNA
119 N-1 C2 + DNA
120 N-1 C13 + DNA
123 N-1 C15 + DNA
124 N-1 C18 + DNA
125 N-1 C20 + DNA
120
119
125
123
124
134
mlU
100
75
50
25
0
-7
4
5
6
7
8

Fig. 7



130
128
124
129
127
134
134 20mer + DNA
126 N-1 G3 + DNA
127 N-1 G6 + DNA
128 N-1 G8-11 + DNA
129 N-1 G16 + DNA
130 N-1 G19 + DNA
mIU
75
50
25
0
-5
4
5
6
7
8
9

Fig. 8

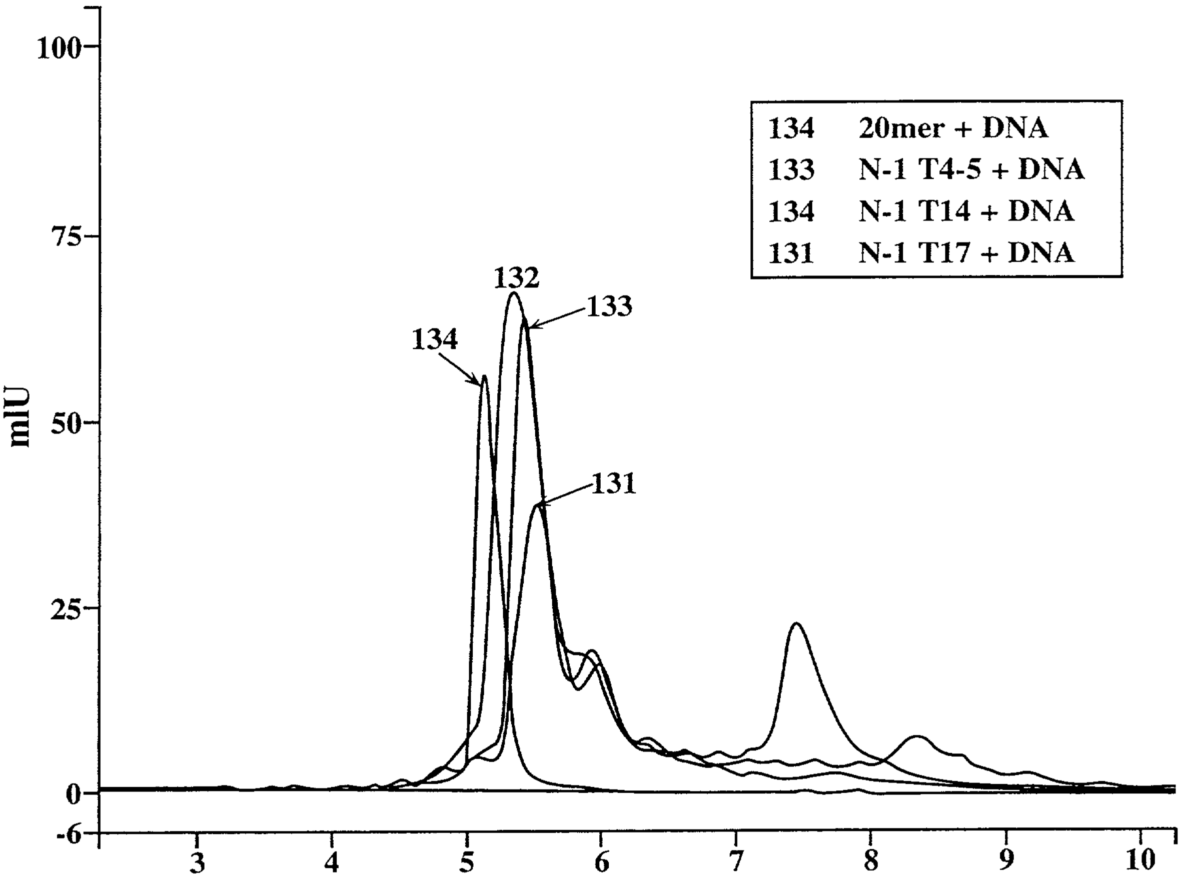

134 20mer + DNA
133 N-1 T4-5 + DNA
134 N-1 T14 + DNA
131 N-1 T17 + DNA
132
133
134
131
mlU
100
75
50
25
0
-6
3
4
5
6
7
8
9
10

Fig. 9

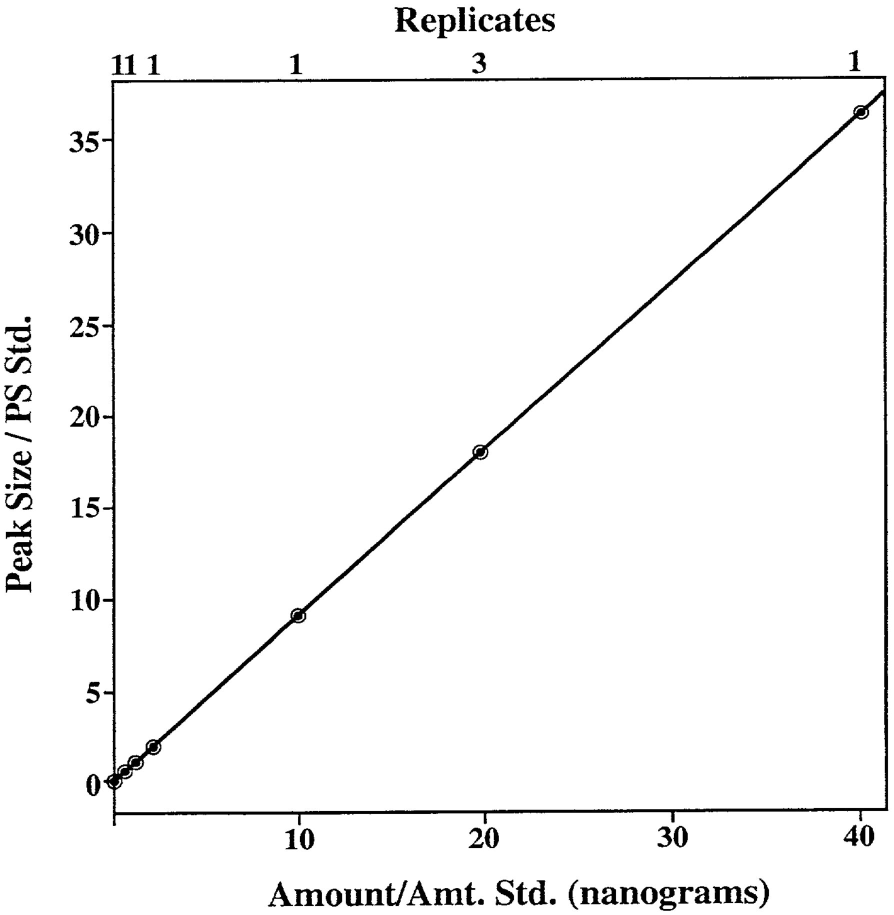
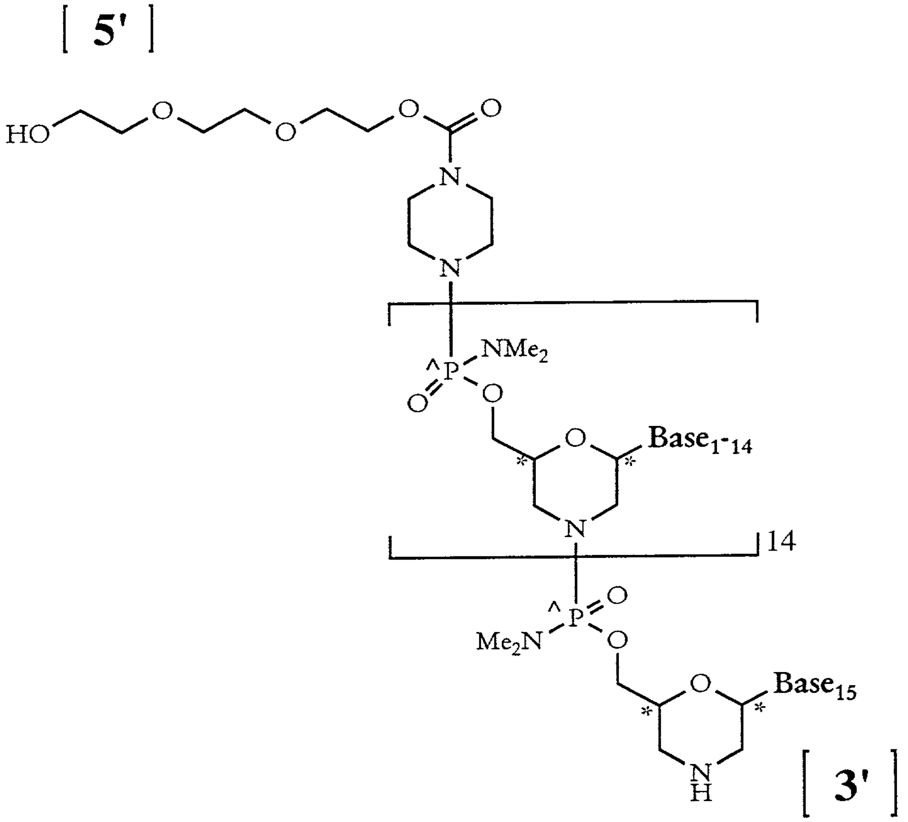

Replicates
11 1
1
3
1
Peak Size / PS Std.
35
30
25
20
15
10
5
0
10
20
30
40
Amount/Amt. Std. (nanograms)

Fig. 10



Base$_{1\text{-}15}$ = GAGGGGCATCGTCGC (5' ⟶ 3')

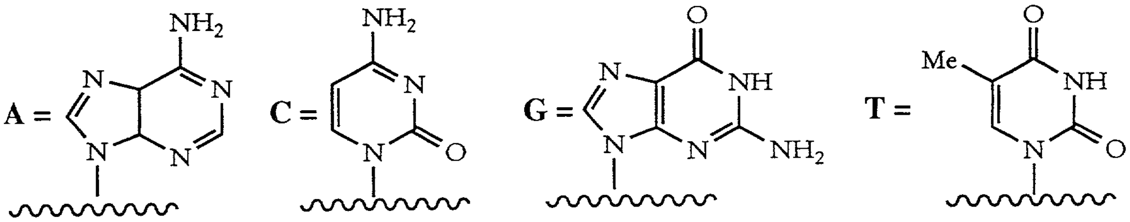


Fig. 11

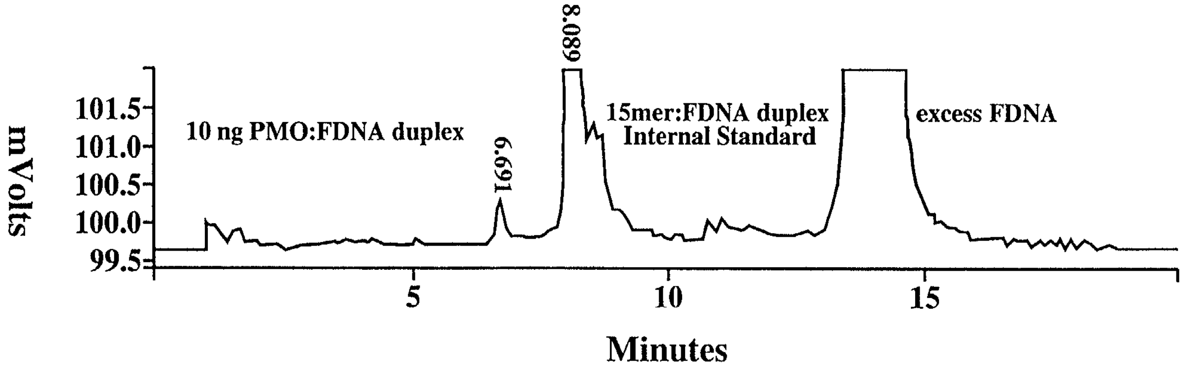

mVolts
101.5
101.0
100.5
100.0
99.5
10 ng PMO:FDNA duplex
6.691
8.089
15mer:FDNA duplex
Internal Standard
excess FDNA
5
10
15
Minutes

Fig. 12